

REMARKS

Claims 1-41 are pending in the Application and all have been rejected in the Office action mailed June 20, 2007. Claims 1, 13, 22, and 31 are independent claims. Claims 2-12, 14-21, 23-30, and 21-41 depend, respectively, from independent claims 1, 13, 22, and 31.

Applicant respectfully requests reconsideration of claims 1-41, in light of the following remarks.

Rejection of Claims

Rejections Under 35 U.S.C. §102(a)

Claims 1-9 and 12 were rejected under 35 U.S.C. §102(a) as being unpatentable over Selkirk et al. (U.S. Patent Publication No. 20030051160, hereinafter "Selkirk"). Applicant respectfully traverses the rejection. Nevertheless, Applicant has amended claim 1 to more clearly describe the subject matter of the claim.

With regard to the anticipation rejections, MPEP 2131 states, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). MPEP 2131 also states, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

With regard to amended claim 1, Applicants respectfully submit that Selkirk fails to teach, suggest or disclose, for example, an electronic device network for updating at least one of firmware and software in a plurality of electronic devices using at least one electronic device update, the network comprising at least one update generator adapted to generate updates, the at least one update generator comprising an encrypting and decrypting engine; at least one update store storing a plurality of electronic device updates; at least one update delivery server adapted to dispense the plurality of

electronic device updates; and wherein at least a portion of the at least one of firmware and software in the plurality of electronic devices is encrypted.

More specifically, Applicant respectfully submits that Selkirk fails to teach or suggest, at least, "...wherein at least a portion of the at least one of firmware and software in the plurality of electronic devices, is encrypted." Applicant respectfully submits that instead, Selkirk teaches "...[a] method, computer program product, and firmware device for directly downloading data from a server in a network to a firmware device, bypassing any unencrypted transmission through computer system with which the firmware device may be associated, so that copies of the data are not as readily made...." (Abstract)

The Office action alleges that Selkirk discloses "...an electronic device network for updating at least one of firmware and software in a plurality of electronic devices using at least one electronic device update, at least one of the firmware and software in the plurality of electronic devices and the at least one update being encrypted (Selkirk: [0009])...." (Office action, page 2) According to Selkirk at paragraph [0009]:

[0009] Accordingly, the present invention is directed towards a method, computer program product, and firmware device for downloading data from a server in a network to a firmware device, bypassing any unencrypted transmission through computer system with which the firmware device may be associated, so that copies of the data are not as readily made. A computer sends a request to a server to download the particular data to a particular firmware device. The server contacts the firmware device directly through the network to initiate the transfer. The server and firmware device communicate over an encrypted data channel so as to prevent any third party, including the aforementioned computer, from intercepting and storing the transmitted data.

Applicant respectfully submits that the portion of Selkirk shown above and cited as teaching "...an electronic device network for updating at least one of firmware and software in a plurality of electronic devices using at least one electronic device update, at least one of the firmware and software in the plurality of electronic devices and the at

least one update being encrypted...”, fails to teach or suggest “...wherein at least a portion of the at least one of firmware and software in the plurality of electronic devices is encrypted...”, as recited in Applicant’s amended claim 1. In fact, no portion of Selkirk teaches anything with regard to updating encrypted firmware or software. Applicant respectfully submits that instead Selkirk teaches “...a firmware device, data processing system, method, and computer program product for downloading data from a network while preventing piracy of copyrighted material once downloaded...”, which is different from and does not anticipate “...wherein at least a portion of the at least one of firmware and software in the plurality of electronic devices is encrypted...”, as recited in Applicant’s amended claim 1. Therefore, Applicant respectfully submits that Selkirk fails to teach or suggest, at least this aspect of Applicant’s claim 1.

In addition, Applicant respectfully submits that Selkirk fails to teach or suggest, at least, “...at least one update generator adapted to generate updates, the at least one update generator comprising an encrypting and decrypting engine...”, as recited in Applicant’s claim 1. The Office action states that Selkirk discloses “...an electronic device network ... comprising ... at least one update generator adapted to generate updates, the at least one update generator comprising an encrypting and decrypting engine...(Selkirk: [0017]: updates are encrypted);...” Applicant respectfully disagrees. According to Selkirk, at paragraph [0017]:

[0017] FIG. 1 depicts a distributed data processing system 100 in which the processes of the present invention may be implemented. Computer 102 connects to Internet 104, through which computer 102 communicates with server 106 and firmware device 108, which is located within computer 102 (although it could be located within a different computer, in an alternative embodiment). In an embodiment of the present invention, computer 102 requests from server 106 that an update to computer 102’s firmware be downloaded from server 106 to firmware device 108. Firmware device 108, stores code and data that defines the fundamental functionality of a hardware device, for use by computer 102 or one or more peripheral devices in association with computer 102. Firmware device 108 may

be, for instance, a monolithic integrated circuit, but it may comprise any combination of hardware components, including discrete logic circuitry, multiple integrated circuits, optical storage, and any other suitable storage medium. In fulfillment of the request, server 106 contacts firmware device 108 via relay through computer 102 and sends the data over an encrypted communications channel to the firmware device 108, where the data is decrypted. No decryption of the data takes place outside of firmware device 108. Thus, no unauthorized copies of the data can be made, since only firmware device 108 can decrypt the encrypted transmission. In a preferred embodiment, the encrypted communications channel is established by means of the Secure Sockets Layer (SSL) protocol, described in more detail in FIG. 3, although any one of a number of different encryption schemes and protocols could be used.
(underline added)

Applicant respectfully submits that the portion of Selkirk shown above and specifically cited by the Office action fails to mention anything about generating an update. Applicant respectfully submits that, in fact, Selkirk taken in its entirety fails to teach or suggest generating an update. Instead, this portion of Selkirk states that "...[i]n an embodiment of the present invention, computer 102 requests from server 106 that an update to computer 102's firmware be downloaded from server 106 to firmware device 108." Selkirk provides no details how the update came to exist, or how the server 106 came into possession of the update, and certainly fails to teach or suggest that server 106 generated the update. Instead, Selkirk simply states that "...[i]n fulfillment of the request, server 106 contacts firmware device 108 via relay through computer 102 and sends the data over an encrypted communications channel to the firmware device 108, where the data is decrypted." Applicant respectfully submits that the teachings of Selkirk related to encryption and the updating of firmware and software are primarily concerned with the transmission of an update using an encrypted transmission means from server 106 to the firmware device 108. Applicant respectfully submits that Selkirk fails to teach or suggest, at least, "...at least one update generator adapted to generate updates, the at least one update generator comprising an encrypting and decrypting

engine...”, as recited in Applicant’s claim 1.

Based upon at least the above, Applicant respectfully submits that the Office action has failed to show where Selkirk teaches or suggests each and every element of Applicant’s claim 1, as required by M.P.E.P. §2131, that the Office has failed to establish a *prima facie* case of anticipation, and that a rejection of claim 1 under 35 U.S.C. §102(a) cannot stand.

Therefore, Applicant believes that Selkirk fails to anticipate amended claim 1, for at least the reasons set forth above. Applicant respectfully submits that because claims 2-12 depend from allowable claim 1, claims 2-12 are also allowable, for at least the reasons set forth above with regard to claim 1. Applicant respectfully requests, therefore, that the rejection of claims 1-9 and 12 under 35 U.S.C. §102(a) be withdrawn.

Rejections Under 35 U.S.C. §103(a)

Claims 10, 11, and 13-41 were rejected under 35 U.S.C. 103(a) as being unpatentable over Selkirk in view of Nachenberg (U.S. 6,230,316). Applicant respectfully traverses the rejection.

The Applicant respectfully submits that the Examiner has failed to establish a case of *prima facie* obviousness for at least the reasons provided below. M.P.E.P. §2142 clearly states that “[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness.” The M.P.E.P. §2142 goes on to state that “[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure.”

With regard to claims 10 and 11, Applicant respectfully submits that claims 10 and 11 are dependent claims depending from amended claim 1. Applicant respectfully
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submits that claim 1 is allowable over the proposed combination of Selkirk and Nachenberg, in that Nachenberg fails to overcome the deficiencies of Selkirk, as set forth above. Because claims 10 and 11 depend from allowable claim 1, Applicant respectfully submits that claims 10 and 11 are also allowable, for at least the same reasons. Applicant respectfully requests, therefore, that the rejection of claims 10 and 11 under 35 U.S.C. §103(a) be withdrawn.

With regard to amended claim 13, Applicant respectfully submits that the proposed combination of Selkirk and Nachenberg fails to teach, suggest, or disclose, for example, a method of updating encrypted information within a firmware image in electronic devices, the method comprising generating binary difference information using a first firmware image and a second firmware image, wherein one or both of the first and second firmware images are partially or entirely encrypted, and wherein generating comprises decrypting encrypted portions of the first and second firmware images; creating an encrypted update for an electronic device using the binary differencing information; and encrypting firmware images by applying at least one of stream symmetric enciphering and block symmetric enciphering.

More specifically, Applicant respectfully submits that the proposed combination of references fails to teach or suggest, at least "...generating binary difference information using a first firmware image and a second firmware image, wherein one or both of the first and second firmware images are partially or entirely encrypted, and wherein generating comprises decrypting encrypted portions of the first and second firmware images...." Neither Selkirk nor Nachenberg make any mention of generating binary difference information using firmware images that are partially or entirely encrypted, and necessarily also fail to teach or suggest that the generating comprises decrypting encrypted portions of the firmware images. Therefore, Applicant respectfully submits that the proposed combination of Selkirk and Nachenberg fails to teach at least aspect of Applicant's claim 13.

Based at least upon the above, Applicant respectfully submits that the proposed combination of Selkirk and Nachenberg fails to teach or suggest all of the limitations of

Applicant's claim 13 as amended, as required by M.P.E.P. §2131, that the Office action has failed to establish a *prima facie* case of obviousness, and that a rejection under 35 U.S.C. §103(a) of claim 13 cannot stand.

Therefore, Applicant respectfully submits that amended claim 13 is allowable over the proposed combination of references, for at least the reasons set forth above. Because claims 14-21 depend from allowable claim 13, Applicant respectfully submits that claims 14-21 are also allowable, for at least the same reasons. Applicant respectfully requests, therefore, that the rejection of claims 13-21 under 35 U.S.C. §103(a), be withdrawn.

With regard to amended claim 22, Applicant respectfully submits that the Selkirk and Nachenberg references, taken alone or in combination, do not teach, suggest, or disclose, for example, an electronic device employing one of encrypting and decrypting techniques to update firmware and software, the electronic device comprising random access memory; and non-volatile memory, the non-volatile memory comprising an update agent; a first in first out (FIFO) memory device; a firmware; a software application; and an update, wherein the electronic device is adapted to update an encrypted portion of at least one of the firmware and the software application selected for updating, and wherein updating at least one of the firmware and the software application comprises decrypting the encrypted portion.

Applicant respectfully submits that the Office action rejected claims 22-41 for the reasons set forth with respect to claims 1-21. (Office action, page 8) Applicant has amended claim 22 to include limitations similar to those added to claims 1 and 13, and respectfully submits that amended claim 22 is allowable, for at least the reasons set forth above with respect to claims 1 and 13.

In addition, Applicant respectfully submits that the proposed combination of references fails to teach, suggest, or disclose, at least, "...non-volatile memory comprising ... a first in first out (FIFO) memory device...", as recited in Applicant's claim 22. Both Selkirk and Nachenberg are silent in this regard, and provide no teachings related to such a device. Therefore, the proposed combination of references fails to

teach or suggest at least this aspect of Applicant's claim 22.

Based at least upon the above, Applicant respectfully submits that the proposed combination of Selkirk and Nachenberg fails to teach or suggest all of the limitations of Applicant's claim 22 as amended, as required by M.P.E.P. §2131, that the Office action has failed to establish a *prima facie* case of obviousness, and that a rejection under 35 U.S.C. §103(a) of claim 22 cannot be maintained.

Therefore, Applicant respectfully submits that amended claim 22 is allowable over the proposed combination of references, for at least the reasons set forth above. Because claims 23-30 depend from allowable claim 22, Applicant respectfully submits that claims 23-30 are also allowable, for at least the same reasons. Applicant respectfully requests, therefore, that the rejection of claims 22-30 under 35 U.S.C. §103(a), be withdrawn.

With regard to claim 31, Applicant respectfully submits that the Selkirk and Nachenberg references, taken alone or in combination, do not teach, suggest, or disclose, for example, a method of building a firmware upgrade for use in an electronic device incorporating encryption, the method comprising building a firmware image to be encrypted, the firmware image comprising a plurality of components; and encrypting the components before assembling the components into an encrypted firmware image.

More specifically, Applicant respectfully submits that neither Selkirk nor Nachenberg teach or suggest anything with respect to components of a firmware image of an electronic device, of assembling such components into a firmware image of an electronic device, and fail to teach or suggest anything with respect to "...encrypting the components before assembling the components into an encrypted firmware image...", as recited in Applicant's claim 31.

Based at least upon the above, Applicant respectfully submits that the proposed combination of Selkirk and Nachenberg fails to teach or suggest all of the limitations of Applicant's claim 31 as amended, as required by M.P.E.P. §2131, that the Office action has failed to establish a *prima facie* case of obviousness, and that a rejection under 35 U.S.C. §103(a) of claim 31 cannot stand.

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Therefore, Applicant respectfully submits that claim 31 is allowable over the proposed combination of references, for at least the reasons set forth above. Because claims 32-41 depend from allowable claim 31, Applicant respectfully submits that claims 32-41 are also allowable, for at least the same reasons. Applicant respectfully requests, therefore, that the rejection of claims 31-41 under 35 U.S.C. §103(a), be withdrawn.

Conclusion

In general, the Office Action makes various statements regarding claims 1-41 and the cited references that are now moot in light of the above. Thus, Applicant will not address such statements at the present time. However, Applicant expressly reserves the right to challenge such statements in the future should the need arise (e.g., if such statements should become relevant by appearing in a rejection of any current or future claim).

Applicant believes that all of claims 1-41 are in condition for allowance. If the Examiner disagrees or has questions regarding this submission, Applicant invites the Examiner to telephone the undersigned at (312) 775-8000.

A Notice of Allowability is courteously solicited.

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Respectfully submitted,

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